



Transforming the Resilience of Cognitive, Cyber-physical Systems

Statement of Themes: Symposia dedicated to promising research in resilient systems that will protect critical cyber-physical infrastructures from unexpected and malicious threats--securing our way of life.

Special/Invite Announcement & Call for Papers

Session S/I-01:

Avoiding Skynet – Humans interacting with Autonomy

Session Abstract:

We are soliciting papers on the development of goal understanding, trust, and resilience in complex systems that are capable of operating autonomously but which can also convey needs and intent, at least in part, to a human team member. We will explore how system resilience can be produced by effectively combining human and machine cognitive abilities. Control methods that incorporate human decisions into autonomous control policies are of interest as are methods for assuring joint understanding of goals and objectives between humans and intelligent machines and methods for establishing trust between humans and intelligent machines. The social dynamics of trust in mixed human-intelligent machine teams, how these dynamics vary in various situational contexts, and methods for optimizing human-intelligent machine organizational structures will be explored.

Topics:

- Human *Autonomous* Systems Integration
- Human-Autonomy Hybrid Control Methods
- Trust in Autonomous Systems
- Metrics for Human and Machine Cognition
- Testing of Human-Autonomous Systems

Chairs:

- David Scheidt, JHU/APL, david.scheidt@jhuapl.edu
- Julie Marble, JHU/APL, julie.marble@jhuapl.edu

Authors' Schedule:

- Paper submission deadline: **April 4, 2016**

Contact Information

Resilience Week

[Craig Rieger](#), Idaho National Laboratory

[Jodi Grgich](#), Idaho National Laboratory

Control Symposium

[Frank Ferrese](#), Naval Sea Systems Command

[David Scheidt](#), Johns Hopkins University

Cyber Symposium

[Marco Carvalho](#), Florida Institute of Technology

[Annarita Giani](#), GE Global Research

[Michael Atighetchi](#), BBN Technologies

Cognitive Symposium

[Ron Boring](#), Idaho National Laboratory

[Roger Lew](#), University of Idaho

[Nathan Lau](#), Virginia Tech

Communication Symposium

[James Sterbenz](#), The University of Kansas

[Jie Wu](#), Temple University

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